

REMARKS

Reconsideration of the subject application as amended herein is respectfully requested.

Briefly, the present application pertains to a novel digital camera module. As shown in the Figures, the module includes a substrate with an image sensor 3, a housing 2 and a barrel 10 with a plate 11 and a lens. The barrel 10 is preferably threadably attached to the housing 2. The plate 11 is permanently attached to the barrel 10, for example, with an adhesive, and it plays two roles. It is used to mount the barrel into the housing and it provides a baffle for the lens within the barrel.

In order to accomplish the first role, the plate 11 in one embodiment is provided with cutouts or holes 5, 7 and 8 and/or has an outer perimeter shaped so that it can be gripped by an automated assembly tool(as shown in Fig. 10. Since the plate is attached to the barrel, the barrel can be thus manipulated during the assembly of the camera module. Alternatively, (or in addition) the plate is made of a magnetic or ferromagnetic material (e.g., a material that is attracted by a magnet) and can be engaged by a tool as discussed at the bottom of page 16 and top of page 17 in the specification for engagement and manipulation by a magnetic tool.

As discussed in the specification, the plate can also act as a baffle and for this purpose, the plate has an inner hole with either two inner diameters, as shown in Figs. 6a and 6c or has a slanting inner wall as shown in Fig. 6b.

All the claims have been amended and new claims have been added to recite these features of the invention. For example, Claim 1 has been amended so that it now recites that a magnetic assembling plate in accordance with the second embodiment of the invention.

The claims stand rejected as being anticipated by or obvious in view of Wu alone, or in combination with other references. The Applicants respectfully traverse these rejections.

Wu discloses a capsule form digital camera including a barrel 202. However, contrary to the Examiner's assertions, Wu fails to disclose a barrel having a plate for manipulating the barrel. As discussed above, this plate can provide this function either by providing holes or by being made of a material that is attracted by a magnet. The Examiner merely observes that in Wu the barrel has an assembling plate, however it is respectfully submitted that there is nothing in Wu to indicate an assembling plate with holes or otherwise.

In rejecting claim 2 directed to a magnetic plate, the Examiner takes the position that these claims are obvious in view of Wu over Nakajoh. Nakajoh discloses a completely different structure in which a lens is disposed adjacent to a disc made of some unnamed metal. The Applicants respectfully submit that this argument fails for at least two reasons. First, as discussed above, Wu does not show a barrel with a plate attached to its top surface. Wu merely shows a barrel with holes and there is no mention of a separate plate. Nor does Wu disclose or appreciate that the assembly of a lens can be facilitated by providing the lens with a barrel having a magnetic assembling plate on its upper surface so

that the barrel can be manipulated easily during an assembly using a magnet as recited by claim 1. Nakajoh uses some metallic disc for protecting a lens and not for manipulating it with a magnet. It is notoriously well known that many commonly used metallic materials are not ferromagnetic. That is, the disc in Nakajoh could be made of a large number of materials that would not be attracted by a magnet. Nakajoh does not even mention the word "magnet." Accordingly, there is nothing Nakajoh to suggest to one skilled in the art to (1) secure an extra plate to the barrel of Wu ; (2) use the plate to manipulate the barrel during assembly; and (3) make the plate out of a material that is either magnetic or ferromagnetic as defined in the claims.


The Examiner is using similar arguments regarding the claims pertaining to the use of the plate as a light baffle. The fact is that Wu does not have a separate plate on the barrel and moreover, its barrel does not provide any baffling. Nakajoh does not disclose a structure that is remotely similar to Wu and therefore there is nothing in Nakajoh that teaches a person skilled in the art why the barrel in Wu needs a baffle or how such a baffle should be constructed and attached to the barrel.

The Examiner has rejected claim 5 in further view of Harada. However this claim is dependent on, and it includes at least some of the limitations of the previous claims and accordingly it is patentable over Harada for the same reasons.

In summary, claim 1 has been amended to recite a lens module with a barrel forming the optical lens and a magnetic assembling plate attached to the

barrel to facilitate the assembly of the barrel using a magnet. None of the references cited disclose a magnetic assembling claim. The remaining independent claims include other features that are not even disclosed by the references. Accordingly, it is respectfully submitted that the subject application is patentably distinguishable over the prior art of record and should be allowed.

Respectfully submitted,
GOTTLIEB, RACKMAN & REISMAN



Tiberlu Weisz, Attorney for Applicants
Reg. No. 29,876

Dated: July 2, 2007.

S:\TW\4611-018am1.doc